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23. (Not Amended) An image forming apparatus according to claim 18, wherein said heat conducting member has a thermal conductivity larger than said envelope.

24. (Not Amended) An image forming apparatus according to claim 19, wherein said heat conducting member has a thermal conductivity larger than said envelope.

25. (Not Amended) An image forming apparatus according to claim 20, wherein said heat conducting member has a thermal conductivity larger than said envelope.

REMARKS

Claims 9-25 are presented for consideration, with Claims 9 and 10 being independent.

The independent claims have been amended to further distinguish Applicant's invention from the cited art.

Claims 9-25 stand rejected under 35 U.S.C. §103 as allegedly being obvious over Sato '919 in view of Bilan '382. This rejection is respectfully traversed.

Applicant's invention as set forth in Claim 9 relates to an image forming apparatus comprised of an envelope including first and second substrates and a frame disposed between the first and second substrates and forming a clearance therebetween, and image forming means disposed within the envelope. In addition, a heat insulating member for suppressing a thermal leakage is disposed on an outer surface of the envelope, including surfaces of the frame and the first and second substrates except for a surface region of the image forming means on at least one of the first and second substrates.

Claim 10 relates to an image forming apparatus that includes an envelope, image forming means and a heat insulating member as set forth in Claim 9. In Claim 10, the heat insulating member suppresses thermal leaking and is disposed on an outer surface of the envelope, including surfaces of the frame and the first and second substrates except for a surface region of the image forming means on both of the first and second substrates.

As will be appreciated, Applicant's claimed invention features an image forming apparatus that is capable of suppressing thermal leakage from an outer surface of the envelope.

The primary citation to Sato relates to a flat panel display that includes an envelope formed of a first substrate 205 and a second substrate 201. An image forming member within the envelope is irradiated with emitted electrons to display images.

The Office Action acknowledges that Sato does not provide a heat insulating member. The secondary citation to Bilan was cited to compensate for this deficiency.

Bilan relates to a flat display screen that relies on thermionic emission of indirectly heated cathode structures. The screen includes a panel of insulating material 20, covered with thin metal material traces 21, that forms part of an indirectly heated cathode structure. In addition, a panel of insulating material 40 containing multiple etched holes 41 is provided opposite to the indirectly heated cathode structure.

The Office Action asserts that it would have been obvious to modify the image display apparatus in Sato to include an insulating member in view of the panels of insulating materials taught in Bilan.

It is respectfully submitted, however, that the insulated panels in Bilan are not disposed on an outer surface of the envelope including surfaces of the frame and the first and second substrates as set forth in Applicant's claims. In Bilan, the panels of insulating material

are provided within the envelope and not disposed on its outer surface. Bilan actually provides many such panels between the front plate 71 and the back plate 10. It is respectfully submitted, therefore, that only through hindsight would one skilled in the art have modified Sato to provide a heat insulating member on an outer surface of the envelope, including surfaces of the frame, as set forth in Applicant's claimed invention.

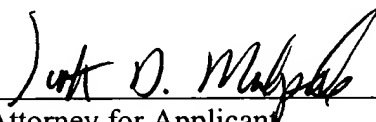
Accordingly, reconsideration and withdrawal of the rejection of the claims under 35 U.S.C. §103 is respectfully requested.

It is submitted, therefore, that Applicant's invention as set forth in independent Claims 9 and 10 is patentable over the cited art. In addition, dependent Claims 11-25 set forth additional features of Applicant's invention. Independent consideration of the dependent claims is respectfully requested.

In view of the foregoing, reconsideration and allowance of this application is deemed to be in order and such action is respectfully requested.

Applicant's undersigned attorney may be reached in our Washington, D.C. office by telephone at (202) 530-1010. All correspondence should continue to be directed to our below-listed address.

Respectfully submitted,



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VERSION WITH MARKINGS TO SHOW CHANGES MADE TO CLAIMS

9. (Twice Amended) An image forming apparatus comprising:

an envelope including first and second substrates and a frame disposed
between said first and second substrates and forming [to form] a clearance therebetween;

image forming means disposed between said first and second substrates
within said envelop, said image forming means including an electron emitting device disposed
on said first substrate and an image forming member disposed on said second substrate, said
image forming member forming an image responsive to an irradiation with an electron emitted
from said electron emitting device; and

a heat insulating member for suppressing a thermal leakage, said
member disposed on an outer surface of said envelope, including surfaces of said frame and said
first and second substrates except for a surface region of said image forming means on at least
one of said first and second substrates.

10. (Twice Amended) An image forming apparatus comprising:

an envelope including first and second substrates and a frame disposed
between said first and second substrates and forming [to form] a clearance therebetween;

image forming means disposed between said first and second substrates
within said envelope, said image forming means including an electron emitting device disposed
on said first substrate and an image forming member disposed on said second substrate, said

image forming member forming an image responsive to an irradiation with an electron emitted from said electron emitting device; and

a heat insulating member for suppressing a thermal leakage, said member disposed on an outer surface of said envelope, including surfaces of said frame and said first and second substrates except for a surface region of said image forming means on both of said first and second substrates.